

ensure the effectiveness and operability of barricades, devices, alarms, and locks. Authorizations shall be required to perform specific work within the area and shall include specific radiation protection measures.

(e) No control(s) shall be installed at any radiological area exit that would prevent rapid evacuation of personnel under emergency conditions.

**§ 835.502 High and very high radiation areas.**

(a) *High radiation areas.* One or more of the following features shall be used for each entrance or access point to a high radiation area where radiation levels exist such that an individual could exceed a deep dose equivalent to the whole body of 1 rem (0.01 sievert) in any one hour at 30 centimeters from the source or from any surface that the radiation penetrates:

(1) A control device that prevents entry to the area when high radiation levels exist or upon entry causes the radiation level to be reduced below that level defining a high radiation area;

(2) A device that functions automatically to prevent use or operation of the radiation source or field while personnel are in the area;

(3) A control device that energizes a conspicuous visible or audible alarm signal so that the individual entering the high radiation area and the supervisor of the activity are made aware of the entry;

(4) Entryways that are locked. During periods when access to the area is required, positive control over each entry is maintained;

(5) Continuous direct or electronic surveillance that is capable of preventing unauthorized entry;

(6) A control device that will automatically generate audible and visual alarm signals to alert personnel in the area before use or operation of the radiation source and in sufficient time to permit evacuation of the area or activation of a secondary control device that will prevent use or operation of the source.

(b) *Very high radiation areas.* In addition to the above requirements, additional measures shall be implemented to ensure individuals are not able to

gain access to very high radiation areas when dose rates are in excess of the posting requirements of § 835.603(c).

(c) No control(s) shall be established in a high or very high radiation area that would prevent rapid evacuation of personnel.

**Subpart G—Posting and Labeling**

**§ 835.601 General requirements.**

(a) Working areas that require posting because of the presence, or potential presence, of radiation and/or radioactive material are delineated in the subsequent paragraphs of this section. Radioactive items or containers of radioactive materials, shall be individually labeled if adequate warning is not provided by control measures and required posting.

(b) DOE approved signs, labels, and radiation symbols shall be used to identify areas specified in this subpart.

(c) Required signs and labels shall have a yellow background. The radiation symbol shall be black or magenta.

(d) Signs required by this subpart shall be clear and conspicuously posted and may include radiological protection instructions.

(e) The posting requirements in this section may be modified to reflect the special considerations of DOE activities conducted at private residences. Such modifications shall provide the same level of protection to individuals as the existing provisions in this section.

**§ 835.602 Controlled areas.**

(a) Each access point to a controlled area (as defined in § 835.2) shall be posted, identifying it as a controlled area, whenever radioactive material and/or radiation fields which would require posting under § 835.603 may be present in the area.

(b) Signs used for this purpose may be selected by the contractor to avoid conflict with local security requirements.

**§ 835.603 Radiological areas.**

Each access point to a radiological area (as defined in § 835.2) shall be posted with conspicuous signs bearing the wording provided in this section.